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Manual for Purdue Farm Supply Center Management Game

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MANUAL FOR PURDUE FARM SUPPLY CENTER MANAGEMENT GAME*,
by E.M. Babb and L.P. Bohl

About Management Games

Management-decision games, such as the one described here, are primarily training devices. Decision exercises are useful in that they can portray a complex of interrelationships. They allow managers to gain experience in using business planning, analytical tools and economic and accounting principles.

This game attempts to duplicate the environment in which businesses selling inputs to farmers and purchasing grain from them must operate. It cannot begin to duplicate all the complexities of the real world, since far too many interrelationships exist. Also in real life each firm's situation is somewhat unique in that cost-volume relationships, customer's response to prices, effectiveness of different selling methods, and other conditions vary from one firm to another and from one locality to another.

There are, however, many factors common to most farm supply businesses which management must consider in making its decisions. A number of management factors are incorporated into this game to provide the participant a realistic experience in decision making. For example, hog supple-

ment sales are influenced by the following: the price you establish relative to your competitor's price, grain bank and mixing and grinding charges, discounts on hog supplement, credit and advertising policies, availability of supplement, your policies regarding direct sales of supplement, trends in hog production and other factors related to the agricultural situation in your market area. There are definite relationships among the decisions made by you and the results of the game. Some of these relationships will be described here and some must be inferred.

Situation

In this game from two to eight farm-supply centers can compete with one another in a rural market or the game administrator may inform you about the activities of your competitors. In the latter case, teams do not compete directly with one another but react to the competitive environment established by the administrator. The administrator will tell you the competitive situation that will be used. A computer is used to process and evaluate decisions which are made.

The farm-supply center you are to manage sells seven categories of feed, four

* The computer program for this game is written in FORTRAN II for the IBM 1130 and CDC 6500 computers. It should be fairly easy to modify for other equipment. This program will be made available by the authors. A great deal of help was provided by the following people in the development of this game: Phil French, Norm Brandley and Ivan Moore of the Indiana Farm Bureau Cooperative; Russell Cole, Indiana Grain Dealers Association and Bill Farris, Department of Agricultural Economics. Lee Schrader and Bill Uhrig gave us suggestions to improve this manual. Perhaps the most important contributors were the 75 managers of farm supply businesses who participated in seven two-day workshops where the game and the manual were put to the acid test of comparison with their businesses and markets.

Table 1. History of farm supply business sales for most recent three years

	Two years ago	One year ago	Last year
	(Tons)	(Tons)	(Tons)
Feed sales:			
Complete hog feed (bulk)	320	375	443*
Hog supplement (bulk)	550	375	700
Pig feed (bag)	230	260	290
Complete beef feed (bulk)	110	120	144
Beef supplement (bulk)	492	535	579*
Other feed (bag)	450	515	576
Plant food:			
Bag fertilizer	1,110	1,015	927
Bulk fertilizer	1,720	1,975	2,227
Anhydrous ammonia	510	600	707
Other fertilizer	280	307	380
Layer feed (bulk)	492	535	579*
Grain marketing:	(Bu.)	(Bu.)	(Bu.)
Corn	330,240	349,740	374,455
Soybeans	110,940	115,385	116,252
Wheat	70,450	64,125	60,876

*This tonnage does not include feed sold via contract livestock.

categories of plant food, purchases three kinds of grain from farmers and provides various kinds of related services. A history of feed, plant food and grain marketing sales for the most recent three-year period is given in Table 1. All participants will assume that these sales represent their own sales history. There has been some increase in services provided farmers. Future sales will be affected by the normal growth or contraction for the market as a whole; however, this growth or contraction probably will not be smooth. Growth or contraction in sales will probably be subject to random fluctuations in kind and numbers livestock raised and type and acreage of crops grown. The game administrator may provide market news items to help you detect any changes in trends.

In addition to changes in sales resulting from the state of agricultural production in the area, sales will be substantially changed by the decisions that you make. For example, if prices are raised relative to prices of competitors, sales (and market share) will de-

cline. You have a fairly well defined trade area, but if all farm-supply centers in your area jointly raised prices, this would undoubtedly cause some of your customers to shop outside the traditional market area. Likewise, if you all lowered prices, you would undoubtedly attract some customers from outside your traditional sales territory.

You are to assume that you have just purchased your farm-supply center and will manage it beginning the first of the year. This business has had a fairly steady increase in sales volume and did about 1.5 million dollars worth of business last year. The business has a history of moderate earnings, but after the change in ownership its financial position is weak (page 8). It will be your job to improve the center's operation and financial position. You have complete authority to do whatever is necessary but will be held accountable for your performance. Your farm-supply center is identified by a number which has been assigned. You will start the game on an equal basis with all other centers. That is,

all participants will start with the same assets, liabilities, inventories, market share and the like.

Decisions made by the previous manager for the past year are shown in Table 2. These decisions are typical of those made in past years and reflect historic price differentials. Sales, costs and other information about the center shown in Table 3 are for the past year. These data are the results of the decision shown in Table 2 and reflect the position from which you will start as you assume management of this business.

Decisions and Rules

You are to record your decisions for each year on the blank decision forms provided by the game administrator. Please fill in the form completely and carefully place decimals where intended.

Price

1. The price you charge customers for each of the feeds and fertilizers must not be more than \$4.00 above or below the average of your competitor's price for the same product. The average of competitor's prices for the last year is given in the results you will get back and is used as the base for the \$4.00 limit in the current year unless the game administrator gives you these prices directly.

2. The price you offer for grains must not be more than 3¢ above or below the average of your competitors' prices for the same grains.

3. The prices you charge customers for services must be not more than \$3.00 above or below competitors' prices in the case of anhydrous application and mixing and grinding supplement, not more than \$2.00 in the case of spreading bulk fertilizer, and not more than 3¢ in the case of grain bank operations.

4. The response of sales to price changes varies among major product classes (feeds and fertilizers) and among specific items in each class (among the seven different kinds of feed).

Direct Sales

1. Indicate the maximum tons of supplement you would be willing to sell and service which goes direct from the feed manufacturer to the farm. Such sales will cut into your own supplement sales to some extent (about 10 per cent) but represent primarily increases in sales.

2. Indicate the margin you desire on these direct sales. The cost of servicing these sales is about 2.7 per cent.

Contract Activity

1. Indicate the price you are willing to pay farmers to finish hogs (dollars/head) and to manage layers (¢/bird/month). The higher these prices, the more interested farmers will be in contracting with you.

2. Indicate the maximum number of hogs and layers you would be willing to contract for the year.

3. Hogs will go into the feed lot at an average of 50 pounds and will gain an average of 150 pounds during the finishing period to be marketed at an average of 200 pounds. Layers will produce an average of 20 dozen eggs per year per hen housed.

4. Costs of contracting hogs includes a fixed charge of \$18.00 per hog to include the feeder hog, normal rates of mortality, shrinkage and medication. In addition, each hog will consume about 600 pounds of feed which will be charged to the hog enterprise at the price you establish for your complete hog feed. The contract price you pay the farmer is also added to the cost of producing the hog. A fixed charge of \$1.65 per bird

Table 2. Decision Form--Purdue Farm Supply Center Management Game

=====			
Farm Supply Center Number <u>1.</u>			
Decision for Year <u>0.</u>			
*-			
<u>Price of Feeds</u>	<u>Price Range</u>		
a. Complete hog feed (bulk)	+ \$4	\$ 65.00	/ton
b. Hog supplement (bulk)	+ \$4	\$ 120.00	/ton
c. Pig feed (bagged)	+ \$4	\$ 99.00	/ton
d. Complete beef feed (bulk)	+ \$4	\$ 66.00	/ton
e. Beef supplement (bulk)	+ \$4	\$ 114.00	/ton
f. Complete layer feed (bulk)	+ \$4	\$ 72.00	/ton
g. Other feed (bagged)	+ \$4	\$ 100.00	/ton
<u>Price of Fertilizer</u>			
h. Bagged fertilizer	+ \$4	\$ 80.00	/ton
i. Bulk fertilizer	+ \$4	\$ 55.00	/ton
j. Anhydrous	+ \$4	\$ 70.00	/ton
k. Other fertilizer	+ \$4	\$ 65.00	/ton
<u>Buying Price for Grains</u>			
l. Corn	+ 3.¢	\$ 1.01	/bu.
m. Soybeans	+ 3.¢	\$ 2.45	/bu.
n. Wheat	+ 3.¢	\$ 1.41	/bu.
<u>Price of Services</u>			
o. Spread bulk fertilizer	+ \$2.	\$ 5.00	/ton
p. Apply anhydrous	+ \$3.	\$ 17.50	/ton
q. Grain bank operation	+ 3.¢	\$ 8.00	/bu.
r. Mix and grind supplement	+ \$3.	\$ 11.00	/ton
Arrangements for Direct Sales:	Would sell up to	30.	tons supplement
direct to farm from feed manufacturer at margin of		4.	%.
<u>Contract Prices Offered and Quantities:</u>	Hogs - offer	\$ 2.00	/head
	for up to	1,000	head
	Layers - offer	8.3	¢/bird/month
	for up to	10,000.	birds
<u>Discounts on Hog Supplement Mixed</u>	Over 20 tons/year	\$ 2.00	
	Over 30 tons/year	\$ 4.00	
	Over 40 tons/year	\$ 6.00	
<u>Foreign Material Discount</u>	For each 1% between 3% and 7% of foreign material	1.	cents
	For each 1% over 7%	2.	cents
<u>Non-Price Decisions</u>			
Advertising expenditure		\$ 7500.	
Credit policy (0,1,2)		1.	
Hog supplement ordered		600.	tons
Bulk fertilizer ordered		2200.	tons
Expenditure for grain storage expansion		\$ 0.	
Expenditure for bulk feed truck (\$9000/truck)		0.	
Hire man		0.	
Fire man		0.	
Borrow money		0.	
Repayment on note		0.	
Make investment		\$10,000.	
Call investment		0.	

is assumed for the layer operation. This includes the pullet, normal mortality, medication and a salvage value on the old hen. Feed costs of about 91 pounds of feed per bird per year are calculated at the price you establish for layer feed. The contract price is also added to the cost of producing eggs. Transportation and other marketing costs are not included in the above charges.

5. Contracting receipts are calculated from the total hog and layer production and the market prices per unit of production. Hog and egg prices will fluctuate from year to year and a history of these prices in recent years is given in Table 5. The game administrator may give you some information which will help you estimate these prices.

Discounts on Hog Supplement

1. These discounts make you more competitive for the business of large farmers.

2. Discounts have the effect of reducing the price you previously established for hog supplement.

Foreign Material Discount

1. Increases in this discount result in some reduction in grain purchased and decreases in the discount will increase grain purchased.

2. The discount has the effect of slightly reducing the price you offered for grains.

Advertising

Increased advertising expenditure results in increased sales and affects sales on all products.

Credit

1. Credit Policy No. 0 is a 30-day policy. Bad debt loss is low and 98 per cent of collections are made in the current year and

are available to meet cash obligations. The remaining 2 per cent appear as accounts receivable and are collected during the next year.

2. Credit Policy No. 1 is a 30 to 60 day policy with some increase in bad debt loss. About 94 per cent of collections are made in the current year.

3. Credit Policy No. 2 is a 60 to 90 day policy. Bad Debt loss is increased further and about 88 per cent of collections are made in the current year.

4. The election of one of these credit policies results in all sales being made subject to that single policy.

5. Extension of the credit period has the effect of increasing sales.

Orders

1. To reduce computation time only hog supplement and bulk fertilizer need to be ordered in this game. These two items are used as a proxy for your total sales planning of feeds and fertilizers. The hog supplement and bulk fertilizer which you order are delivered in time to meet sales for the current year.

2. If the quantity ordered plus inventory is insufficient to meet current sales demands, such excess potential sales are lost and are reported to you as stockouts. Excess of these two items is carried over as inventory. A direct charge of \$2.00 per ton is made for all tonnage of hog supplement and bulk fertilizer carried over in inventory. Indirect costs include the interest on money tied up in inventory.

3. If you stockout of either hog supplement or bulk fertilizer, other feeds or fertilizer sales will be reduced by a factor to reflect the poor sales planning on these two items. This factor will be indicated to you in your results. It is calculated to show the percentage of your potential sales you

Table 3.

Market	1.	Supply Center	1.	Year	0.
OPERATING STATEMENT					
=====					
Sales --Dollars--					
Complete hog feed	-bulk-		44,013.28		
Hog supplement	-bulk-		84,000.01		
Pig feed	-bagged-		28,663.24		
Complete beef feed	-bulk-		9,505.65		
Beef supplement	-bulk-		32,962.62		
Complete layer feed	-bulk-		74,092.00		
Other feed	-bagged-		<u>57,610.01</u>		
Total Feed			330,846.81	*	
Bagged fertilizer			74,228.93		
Bulk fertilizer			125,227.70		
Anhydrous			49,504.89		
Other fertilizer			<u>24,666.06</u>		
Total Fertilizer			273,627.62	*	
Corn marketing			393,175.31		
Soybean marketing			290,629.56		
Wheat marketing			<u>88,270.78</u>		
Total Grain Marketing			772,075.62	*	
Total Other Farm Supplies			181,153.18	*	
		TOTAL			1,557,703.00
Cost of Goods Sold --Dollars--					
Complete hog feed	-bulk-		36,531.02		
Hog supplement	-bulk-		70,560.00		
Pig feed	-bagged-		23,509.65		
Complete beef feed	-bulk-		7,885.36		
Beef supplement	-bulk-		27,685.71		
Complete layer feed	-bulk-		61,228.80		
Other feed	-bagged-		<u>47,816.31</u>		
Total Feed			275,216.87	*	
Bagged fertilizer			66,806.04		
Bulk fertilizer			102,686.71		
Anhydrous			39,603.92		
Other fertilizer			<u>20,491.80</u>		
Total Fertilizer			229,588.46	*	
Corn marketing			378,197.25		
Soybean marketing			284,816.93		
Wheat marketing			<u>85,835.73</u>		
Total Grain Marketing			748,849.87	*	
Total Other Farm Supplies			144,922.56	*	
		TOTAL			1,398,577.75

Table 3 (continued).

Gross Margin on Sales --Dollars--

Complete hog feed	-bulk-	7,482.25	
Hog supplement	-bulk-	13,440.01	
Pig feed	-bagged-	5,153.59	
Complete beef feed	-bulk-	1,620.28	
Beef supplement	-bulk-	5,276.90	
Complete layer feed	-bulk-	12,863.18	
Other feed	-bagged-	<u>9,793.70</u>	
Total Feed		55,629.94	*
Bagged fertilizer		7,422.89	
Bulk fertilizer		22,540.98	
Anhydrous		9,900.97	
Other fertilizer		<u>4,174.25</u>	
Total Fertilizer		44,039.11	*
Corn marketing		14,978.06	
Soybean marketing		5,812.62	
Wheat marketing		<u>2,435.04</u>	
Total Grain Marketing		23,225.73	*
Total Other Farm Supplies		36,230.63	*

TOTAL 159,125.43

Service Income --Dollars--

Direct feed sales from mill	126.00
Spread bulk fertilizer	5,714.94
Spread anhydrous	7,433.79
Grain bank operation	9,180.80
Feed grinding and mixing	8,751.66
Bulk feed delivery	<u>13,591.87</u>

TOTAL 44,799.07

Gross Operating Income 203,924.50 **

Operating Expenses --Dollars--

Fixed facility and other cost	33,750.00
Variable services cost	23,269.51
Other variable cost	74,972.23
Fixed feed truck cost	2,400.00
Variable feed truck cost	5,096.95
Truck rental	0.00
Labor cost	26,549.80
Labor overtime cost	0.00
Bad debt loss	1,571.25
Interest charges	10,750.00
Advertising expenses	<u>7,500.00</u>

TOTAL 185,859.71

Net Operating Margin 18,064.78

Table 3 (continued).

Net Operating Margin (brought forward)		18,064.78
Interest on investment	600.00	
Profit on hog contracting	149.99	
Profit on layer contracting	1,139.99	
Other income	6,285.01	
Total Other Income		<u>8,175.00</u>
Net Revenue		26,239.79
Net Revenue - Per Cent of Sales-		1.68

BALANCE SHEET

Assets --Dollars--		
Cash	14,208.45	
Investments	10,000.00	
Accounts receivable	47,137.64	
Inventory	81,043.31	
Facilities	356,250.06	
Trucks	9,600.00	
	TOTAL	518,239.43
Liabilities		
Long term debt	50,000.00	
Bank notes	100,000.01	
	TOTAL	<u>150,000.03</u>
Net Worth		368,239.43
Net Worth to Fixed Assets		1.00
Return on Investment		7.12

GENERAL INFORMATION

Sales --Tons--		
Complete hog feed	-bulk-	677.12
Hog supplement	-bulk-	700.00
Pig feed	-bagged-	289.52
Complete beef feed	-bulk-	144.02
Beef Supplement	-bulk-	289.14
Complete layer feed	-bulk-	1,029.05
Other feed	-bagged-	<u>576.10</u>
Total Feed		3,704.98 *
Bagged fertilizer		927.86
Bulk fertilizer		2,276.86
Anhydrous		707.21
Other fertilizer		<u>379.47</u>
Total Fertilizer		4,291.41 *

Table 3 (continued).

Corn marketing	-bushel-	374,452.75
Soybean marketing	-bushel-	116,251.82
Wheat marketing	-bushel-	<u>60,876.41</u>
Total Grain Marketing		551,581.00 *
Stock-outs		
Hog supplement	-tons-	51.59
Bulk fertilizer	-tons-	0.00
Stock-out factor for other feeds		0.9631
Stock-out factor for other fertilizer		1.0000
Grain Business Lost Due to Short Storage		
Corn	-bushel-	0.00
Soybeans	-bushel-	0.00
Wheat	-bushel-	0.00
Inventory Information		
Hog supplement	-tons-	0.00
Bulk fertilizer	-tons-	23.13
Hog supplement	-dollars-	0.00
Bulk fertilizer	-dollars-	1,043.29
Facilities Report		
Number men		4.
Grain storage capacity	-bushel-	120,000.
Number trucks		2.
Utilization Report		
Labor utilization		0.9661
Grain facility		0.9462
Trucks		0.8494
Hog Contracting Report		
Hog potential at contract offer		800.
Hogs contracted		800.
Tons of complete feed used		233.99
Hog selling price		20.00
Cost per cwt.		19.90
Layer Contracting Report		
Layer potential at contract offer		20,000.
Layers contracted		10,000.
Tons of feed used		450.00
Egg selling price		0.300
Cost per doz.		0.294
Direct Sales Report		
Potential sales at your margin		300.00
Direct sales made	-tons-	30.00
Sales Price		105.000
Other Service Report		
Bushels corn banked		114,760.09
Tons bulk feed delivered		3,397.96
Tons bulk fertilizer spread		1,142.98
Tons of anhydrous applies		424.78
Tons of supplement mixed		795.60

Table 3 (continued).

Average Prices of Competitors		Your Price
Complete hog feed	65.00	65.00
Hog supplement	120.00	120.00
Pig feed	99.00	99.00
Complete beef feed	66.00	66.00
Beef supplement	114.00	114.00
Layer feed	72.00	72.00
Other feed	100.00	100.00
Bagged fertilizer	80.00	80.00
Bulk fertilizer	55.00	55.00
Anhydrous	70.00	70.00
Other fertilizer	65.00	65.00
Corn	1.0100	1.0100
Soybeans	2.4500	2.4500
Wheat	1.4100	1.4100
Spread fertilizer	5.00	5.00
Apply anhydrous	17.50	17.50
Grain bank service	8.00	8.00
Mix supplement	11.00	11.00

MARKET SHARE REPORT

Table 4.

Year 0.
Market 1.
CENTER

	1	2	3	4	5	6	7	8
Comp. hog	0.5000	0.5000						
Hog Supp.	0.5000	0.5000						
Pig feed	0.5000	0.5000						
Beef Com	0.5000	0.5000						
Beef Sup	0.5000	0.5000						
Layer	0.5000	0.5000						
Layer	0.5000	0.5000						
Oth. Feed	0.5000	0.5000						
Bag Fert	0.5000	0.5000						
Bul. Fert	0.5000	0.5000						
Anhyd.	0.5000	0.5000						
Oth. Fert	0.5000	0.5000						
Corn Mkt	0.5000	0.5000						
Soybeans	0.5000	0.5000						
Wheat	0.5000	0.5000						

Table 5. Average annual prices of farm products midwest USA, ten-year period

Years ago	Eggs per dozen	Hogs per cwt.	Wheat per bu.	Corn per bu.	Soybeans per bu.
	¢	\$	\$	\$	\$
10	30.7	15.80	1.81	1.11	2.07
9	30.6	15.60	1.76	1.08	2.03
8	27.9	16.90	1.78	1.02	2.00
7	28.5	16.60	1.80	.99	2.50
6	28.6	15.10	1.92	1.00	2.32
5	28.8	15.10	1.86	1.11	2.52
4	28.5	21.00	1.58	1.13	2.51
3	34.5	23.40	1.36	1.18	2.66
2 years ago	26.0	19.20	1.57	1.24	2.94
Last year	32.6	20.25	1.40	1.16	2.62
Most recent 3-yr. period	31.0	20.95	1.44	1.19	2.74
10-year average	29.7	17.90	1.68	1.10	2.42

actually could fill with the material you had on hand.

4. Assume that all product purchases cost the same for all competing centers and that all grain will be sold for the same price. This means that you will have no control over cost of goods sold or the price you receive for grains, eggs, and hogs.

Grain Storage Expansion

1. Grain storage facilities may be expanded at a cost of \$1.50 per bushel and will meet the requirements of any of the grains handled.

2. If such an expenditure is made, the additional space will be available in the current year and must be paid for in the current year. If cash is not available, funds will be borrowed under conditions explained under loans.

3. In the grain banking operation, corn banked is assumed to turn four times while

all of the grains merchandised are assumed to turn 6.5 times.

4. The grain bank operation is assumed to have priority on the use of storage capacity. If adequate storage capacity is not available to meet both the grain bank requirements and the grain merchandising requirements, you will be unable to merchandise your potential grain sales. Any grain business lost for this reason will be indicated to you in a report.

5. Your utilization of grain storage capacity is given to you to assist in making this decision.

6. Depreciation of grain storage facilities is on a 20-year basis and appears as part of the fixed facility cost.

Bulk Feed Truck Purchase

1. Additional 7-ton bulk feed trucks can be purchased at a cost of \$9,000 each and are available during the year purchased

but also must be paid for on delivery.

2. One truck must be available for each 2,000 tons of bulk feed delivered. Currently, about half of the bulk feed sold is delivered.

3. If enough trucks are not owned to meet requirements, they are automatically rented for the required time. The rental is \$4.00/ton delivered compared to \$1.50/ton delivered on your own trucks.

4. Depreciation is on a 5-year schedule and is shown as fixed feed truck costs.

Personnel

1. The manager has complete flexibility in hiring and firing men. Workers hired are assumed to be as efficient as others during the year they are hired.

2. Each man is guaranteed a minimum of \$6,000 per year.

3. If adequate labor is not available to meet requirements, the men will work on an overtime basis of 1 1/2 times the normal rate.

4. One man is required for roughly each \$150,000 of feed or fertilizer cost of goods sold or 1.5 million dollars worth of grain business.

5. The labor you make decisions about is variable labor. In addition, there is \$15,000 worth of fixed labor in the business.

Loans

1. Your firm has a long term debt of \$50,000 at 5.5 per cent interest per year. This amounts to a fixed interest charge of \$2750 per year and is part of the annual operating expenses.

2. The rate of interest charged on your bank notes outstanding amounts to 6.5 per cent annually if the ratio of net worth to fixed

assets is greater than 1.2. The interest rate is 8 per cent otherwise.

3. If you do not anticipate cash needs and are forced to obtain a loan in the middle of the year to meet cash obligations, the rate of interest will be 12 per cent on the automatic loan which will be made.

4. All loans are repaid at the beginning of the year.

Cash Flow

1. Cash obligations consist of product purchases (cost of goods sold adjusted for changes in hog supplement and bulk fertilizer inventory), variable service cost (about 4¢/bu. of corn banked, \$9.00/ton of supplement mixed, \$4.50/ton of bulk fertilizer spread, \$15.00/ton of anhydrous spread, 2.7 per cent on direct supplement sales), other variable costs (approximately \$6.00/ton of feed sold, \$5.50/ton of fertilizer sold and 2¢/bu. of grain handled), variable feed truck costs, truck rental, labor costs, labor overtime costs, bad debt loss, interest charges, advertising expenses, feed truck purchases, grain storage expansion expenditures, investments made, and loans repaid.

2. Cash to meet obligations consist of cash on hand at the beginning of the year, cash sales (revenue less accounts receivable), beginning accounts receivable, interest earned on investments, loans secured and investments called.

Investments

1. Excess cash may be invested so as to earn 6 per cent annually.

2. Investments can be called at any time to meet cash needs.

3. If the firm does not have the cash to meet its obligations, investments are called in total with loss of interest for that year.

4. Investments are called to meet cash obligations before an automatic loan (at 12 per cent) is initiated.

Game Results

The results of the decisions you make will be transmitted to you in the form of a report composed of an operating statement and balance sheet as of the end of the current year and some general information. These reports should be studied carefully before filling out the next year's decision form. The information in these reports should provide valuable insights to trouble areas and suggest decisions to improve results.

The kind of information provided each year is shown in Table 3. The general information section shows the sales in physical units as well as stock-outs, grain busi-

ness loss through inadequate storage, a utilization report on truck, labor, and grain storage utilization, a report on hog contracting and layer contracting activities, a report on direct feed sales, a report on services provided, and a report on average prices in your market area.

In addition, you will receive an annual Market Share Report which gives your share of the market relative to your competitors (Table 4).

You are now ready to make your first decision. Remember, all participants will assume management of their firm based on the results shown in Table 3. This and other information should be carefully studied before completing the decision form for the first year of business.

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